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Application No.: 10/528,381

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Docket No.: 04634/0202652-US0

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Frank Kenneth Crundwell et al.

Application No.: 10/528,381

Confirmation No.: 6871

Filed: June 1, 2005

Art Unit: N/A

For: INTRODUCTION OF MICROORGANISMS
IN BIO-ASSISTED HEAP LEACHING
OPERATIONS

Examiner: Not Yet Assigned

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted in accordance with 37 C.F.R. 1.97, 1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

1. This IDS should be considered, in accordance with 37 C.F.R. 1.97, as it is filed:

(Check one of the boxes A-D)

- ☐ A. Within three months of the filing date of the above-identified national application or within three months of the entry into the national stage of the above-identified international application.
- ☒ B. before the mailing date of a first office action on the merits, or a first office action after filing a request for continued examination.
- ☐ C. after (A) and (B) above, but before final rejection or allowance, and Applicants have made the necessary statement in box "i" below or paid the necessary fee in box "ii" below.

(check one of the boxes "i" and "ii" below:)

- ☐ i. Counsel states that, upon information and belief, each item of information listed herein was
(check one of boxes (a) or (b))
- ☐ (a) first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- ☐ (b) was not cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of undersigned after making reasonable inquiry, was not known to any individual designated in 1.56(c) more than three months prior to the filing of this IDS.
- ☐ ii. A check for the fee set forth in 1. 17(p), presently believed to be \$180, is enclosed.
- ☐ D. after (A), (B) and (C) above, but before payment of the issue fee: Applicant petitions under 37 C.F.R. 1.97(d) for the consideration of this IDS. Under 37 CFR 1.17(i) a check in the amount of \$180.00 is enclosed. Counsel certifies that, upon information and belief, each item of information listed herein was
(check one of boxes (a) or (b))
- ☐ (a) first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- ☐ (b) was not cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of undersigned after making reasonable inquiry, was not known to any individual designated in 1.56(c) more than three months prior to the filing of this IDS.

2. In accordance with 37 C.F.R. 1.98, this IDS includes a list (e.g., form PTO/SB/08) of all patents, publications, or other information submitted for consideration by the office, either incorporated into this IDS or as an attachment hereto. A copy of each document listed is attached, except as explained below.

(check boxes A, B and/or C and fill in blanks, if appropriate.)

- ☒ A. Pursuant to the Notice issued by the United States Patent and Trademark Office dated July 11, 2003 waiving the requirements of 37 C.F.R. § 1.98(a)(2)(i), a copy/copies of the United States Patent on PTO/SB08 is/are not being submitted.
- ☐ B. Document(s) _____ is (are) deemed substantially cumulative to document(s) _____, and, in accordance with 1.98(c), only a copy of each of the latter documents is enclosed.

- ☐ C. Certain documents were previously cited by or submitted to the Office in the following prior applications, which are relied upon under 35 U.S.C. 120:

[SERIAL NO. & FILING DATE].

Applicant identifies these documents by attaching hereto copies of the forms PTO-892, PTO-1449 and/or PTO/SB/08 from the files of the prior application(s) or a fresh PTO/SB/08 listing these documents, and request that they be considered and made of record in accordance with 1.98(d). Per 37 CFR 1.98(d), copies of these documents need not be filed in this application.

☐ 3. Cite Nos. _____ are not in the English language. In accordance with 1.98(c), Applicant states:

- ☐ An English translation of each document (or of the pertinent portions thereof), or a copy of each corresponding English-language patent or application, or English-language abstract (or claim) is enclosed.
- ☐ The requirement for a concise explanation of the relevance of any foreign language document is satisfied by the attached search report; citation of the documents cited in the search report shall not be construed as an admission that they are or are considered to be, material to patentability of the subject matter claimed herein (See MPEP §609).
- ☐ A concise explanation of the relevance of document(s) _____ is set forth as follows: [Insert concise explanation of relevance]
- ☐ A concise explanation of the relevance of document(s) _____ can be found on page(s) _____ of the specification.
- ☐ A concise explanation of document(s) _____ can be found on the attached sheet.

☒ 4. No explanation of relevance is necessary for documents in the English language (see reply to Comments 67 in the preamble to the final rules; 1135 OG 13 at 20).

☐ 5. Other information being provided for the examiner's consideration follows:

[A/An _____ Search Report, dated _____, which issued during the prosecution of _____ Application No. _____ which corresponds to the present application.]

6. In accordance with 37 C.F.R. 1.97(g) and (h), the filing of this IDS should not be construed as a representation that a search has been made or that information cited is, or is considered to be, material to patentability as defined in §1.56 (b), or that any cited document listed or attached is (or constitutes) prior art. Unless other-wise indicated, the date of publication indicated

for an item is taken from the face of the item and Applicant reserves the right to prove that the date of publication is in fact different.

CROSS REFERENCE UNDER 37 C.F.R. §1.78 TO RELATED APPLICATIONS

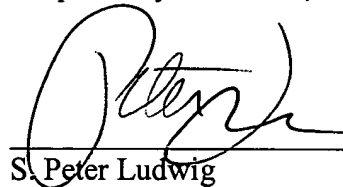
Pursuant to 37 C.F.R. (§1.78, Applicant notes that the above-identified patent application may be related to the following U.S. Patent Applications:

(1) U.S. Provisional Application Serial No _____, filed _____.

Early and favorable consideration is earnestly solicited.

Date: May 15, 2006

Respectfully submitted,



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Registration No. 25,351
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PTO/SB/08a/b (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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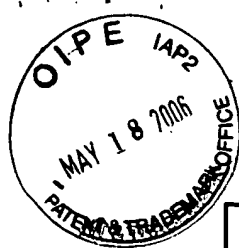
Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)			Complete if Known		
			Application Number	10/528,381	
			Filing Date	June 1, 2005	
			First Named Inventor	Frank Kenneth Crundwell	
			Art Unit	N/A	
			Examiner Name	Not Yet Assigned	
Sheet	1	of	2	Attorney Docket Number	04634/0202652-US0

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	AA*	US-6,110,253-B1	08-29-2000	Kohr et al.	
	AB*	US-5,873,927	02-23-1999	Schaffner et al.	
	AC*	US-6,207,443-B1	03-27-2001	King	
	AD*	US-5,030,279-B1	07-09-1991	Krauth	
	AE*	US-5,779,762	07-14-1998	Kohr et al.	
	AF*	US-5,985,221	11-16-1999	Knecht et al.	
	AG*	US-5,763,259	06-09-1998	Panos et al.	
	AH*	US-5,612,431	03-18-1997	Waddell et al.	
	AI*	US-6,277,341	08-21-2001	Pinches et al.	
	AJ*	US-5,196,052	03-23-1993	Gross et al.	
	AK*	US-5,834,294	11-10-1998	James A. Brierley	
	AL*	US-6,149,711	11-21-2000	Lane	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	BA	WO-WO0071763	11-30-2000			✓
	BB	WO-WO03042604	05-22-2003			✓
	BC	WO-WO02070758	09-12-2002			✓
	BD	WO-WO0136693	05-25-2001			✓
	BE	WO-WO03068999	08-21-2003			✓
	BF	WO-WO0229124	04-11-2002			✓
	BG	WO-WO0202832	01-10-2002			✓
	BH	WO-WO03010295	02-06-2003			✓
	BI	WO-WO02070757	09-12-2002			✓
	BJ	WO-WO0144519	06-21-2001			✓
	BK	WO-WO0118264	03-15-2001			✓
	BL	WO-WO03006696	01-23-2003			✓

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	David G. Dixon, "Analysis of heat conservation during copper sulphide heap leaching", Hydrometallurgy 58 (2000) pp. 27-41.	
	CB	G. Zarate, et al., "The metallurgy of the Mantoverde Project", Hydrometallurgy 39 (1995) 307-319.	
	CC	C.L. Brierley, "Bacterial succession in bioheap leaching", Hydrometallurgy 59 (2001), pp. 249-	
{W:\046 34\0202		Date Considered	



PTO/SB/08a/b (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

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Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/528,381
				Filing Date	June 1, 2005
				First Named Inventor	Frank Kenneth Crundwell
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	2	of	2	Attorney Docket Number	04634/0202652-US0

		255.	
	CD	Bartlett, R.W. Simulation of ore heap leaching using deterministic models Hydrometallurgy, vol 29 pp 231-260, 1992	
	CE	Braun, R.L., Lewis, A.E., Wadsworth, M.E., In-place leaching of primary sulphide ores: laboratory leaching data and kinetics model. Solution Mining Symposium, AIME, pp 295-323, 1974	
	CF	Davis, G.B., Doherty, G., Ritchie, A.I.M., A model of oxidation in pyretic mine wastes: part 2 - Comparison of numerical and approximate solutions. Applied Mathematical Modelling vol 10 pp 323, 329, 1986	
	CG	Davis, G.B., Ritchie, A.I.M. A model of oxidation in pyrite mine wastes: part 1 - equations and approximate solutions. Applied Mathematical Modelling vol 10 pp314-323, 1986	
	CH	Davis, G.B., Ritchie, A.I.M. A model of oxidation in pyretic mine wastes: part 3 - importance of particle size distribution. Applied Mathematical Modelling vol 11 pp 417-422, 1987	
	CI	Dixon, D.G. Analysis of heat conservation during copper sulphide heap leaching. Hydrometallurgy vol 58 pp 27-41, 2000	
	CJ	Roman, R.J., Olsen, C. Theoretical scale-up of heap leaching. In F.F> Aplan, W.A. McKinney, and A.D. Pernichele, editors, Solution Mining Symposium , pp 211-229, AIME, 1979.	
	CK	Pantelis, G., Ritchie, A.I.M. Rate-limiting factors in dump leaching of pyretic ores. Applied Mathematical Modelling vol 16 pp 553-560.	
	CL	Pantelis, G., Ritchie, A.I.M. Macroscopic transport mechanisms as a rate-limiting factor in dump leaching of pyrite ores. Applied Mathematical Modelling vol 15 pp 136-143	
	CM	Pantelis, G., Ritchie, A.I.M., Optimizing oxidation rates in heaps of pyretic material. Biohydrometallurgical Technologies, pp 731-738	
	CN	Ritchie, A.I.M. Optimization of biooxidation heaps. In Rawlings, D.E. editor, Biomining, theory, microbes, and industrial process. Chapter 10 Pp 201- 226. Springer-Verlag, 1997	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

W:046		Date	
3410202		Considered	



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Application No. (if known): 10/258,381

Attorney Docket No.: 04634/0202652-USO

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